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UNCLAS SECTION 01 OF 02 VILNIUS 000731

SIPDIS

DEPT FOR EUR/NB AND OES/STC
DEPT PASS TO NATIONAL SCIENCE FOUNDATION INTERNATIONAL
DIVISION AND CIVILIAN RESEARCH AND DEVELOPMENT FOUNDATION
COMMERCE FOR NIST

E.O. 12958: N/A

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SUBJECT: LITHUANIAN SCIENTISTS ADJUST TO A NEW, MARKET-BASED REALITY

REFS: A) VILNIUS 675, B) VILNIUS 144, C) 04 VILNIUS 760

1. Summary: Lithuania's research institutes have significant research and development (R&D) capabilities, but generally fail to produce profitable and marketable innovations. While there are some exceptions -- notably in lasers, electronics, and biochemistry -- inadequate funding and a lack of communication among business and research organizations limit the usefulness of Lithuania's research institutions. Closer integration of the needs of the Lithuanian economy with the capabilities of local scientists would benefit Lithuania's scientific community and its economic development. Future Embassy Science Fellows could be helpful in this regard. End Summary.

EMBASSY SCIENCE FELLOW ASSESSES LITHUANIAN R&D

2. Embassy Science Fellow Geoffrey Prentice visited Vilnius in May to promote collaborative activities between US and Lithuanian researchers, mainly by presenting a series of lectures on opportunities available through the National Science Foundation (NSF). He visited several universities and research institutes during his stay and spoke with dozens of university faculty and research institute employees. His experience also provided the Embassy with a useful overview of the state of Lithuania's R&D capabilities.

THE MAIN PROBLEM: MONEY

3. The main problem for Lithuanian researchers is the lack of funding. Government expenditure on R&D is approximately 0.6 percent of GDP; most industrialized countries spend 2-3 percent. The GOL, pressed by other public needs, is unlikely to raise this amount significantly in the near future. Low expenditure on R&D results in low salaries, few opportunities for younger scientists, unattractive working conditions, and a general lack of economic incentive for the brightest students to become researchers. The GOL's practice of generally allocating funding through block grants rather than a competitive process further compounds the problem by rewarding longevity rather than innovation.

4. Lithuanian researchers have had some limited success in attracting other sources of funding. A few have formed relationships with industrial partners, mainly companies based in Western Europe and the United States. Some Lithuanian researchers have successfully competed for EU research grants.

5. Even the most successful Lithuanian research institutes, however, face financial difficulties that limit their capabilities. The Institute of Biochemistry, for example, employs 140 people, yet survives on an annual budget of about USD 2 million, half of which comes from research contracts and half from government. This limited budget prevents the Institute from filing for and defending patents for its innovations. Instead, its intellectual property is controlled entirely by its industrial partners, which include Bayer, Sigma-Aldrich, and Merck. As a result, the Institute does not generate the continual, long-term profit that would come from owning patents on its innovations.

STRUCTURAL PROBLEMS: THE SOVIET LEGACY

6. Universities in Lithuania are generally geared towards teaching, while most scientific investigation is conducted at research institutes, an arrangement standard throughout the former Soviet Union. While some of the leading institutions, such as Vilnius University, Kaunas Technical University, and the Kaunas Technology Center, are integrating teaching and research successfully, this divide is still apparent.

17. The collapse of the Soviet Union constituted an existential crisis for many of Lithuania's research institutes, many of which had specialized in defense-related activities. Staff cuts up to 75 percent were common. Those that remained were often the most senior researchers. Despite their significant scientific ability, these men and women had little experience in competing for grants or working on profitable and marketable innovations. Management at the institutes is becoming more entrepreneurial, but still lacks experience in applying for competitive grants and cooperating with private enterprise.

GLIMMERS OF HOPE

18. The outlook for Lithuanian R&D is not entirely negative. Lithuanian research institutes employ many very capable scientists, and Lithuania has the potential to be a source of low-cost R&D for Western institutions. Lithuania's capabilities in biochemistry and lasers are especially impressive. In addition, Lithuania has strong capabilities in electronics: the Semiconductor Physics Institute, which collaborates with Lockheed Martin and the U.S. Army's Space and Missile Command, is conducting cutting-edge research on optoelectronics, chemical sensors, and defenses against electromagnetic pulses. Unfortunately, this sort of collaboration is rare.

19. The Embassy is finalizing negotiations on a new bilateral Science and Technology Agreement, which will be a vital step in strengthening U.S.-Lithuanian cooperation in this field. The agreement will establish valuable IPR protections, provide Lithuanian researchers with more opportunities to bridge the divide between research institutions and the commercial sector, ensure the long-term viability of Lithuania's science capabilities, and increase private sector investment in science-related activities, including R&D. This long-awaited agreement (reftels) had been held up by an interpretation of EU directives that would have subjected purchases financed by USG grants to value-added tax (VAT) under Lithuanian law, a situation that would have prohibited most USG agencies from issuing grants in Lithuania. The GOL's current proposal for alleviating this problem obligates the GOL to refund VAT to Lithuanian institutions that are assessed VAT on goods purchased with USG grant monies. We expect that the GOL will formally present their proposal to us by the end of the summer.

COMMENT: PARTNERS NEEDED

110. This year's Embassy Science Fellow, the third we have hosted, did an excellent job of reaching out to a wide array of research institutes in Lithuania and bringing to their attention funding opportunities that are available. Given the resource shortages these institutes face, this type of assistance is vital. The next logical steps for a future Embassy Science Fellow are to assist Lithuanian institutions in actually applying for specific sources of funding, identifying specific potential business partners and establishing collaborative arrangements with them, and helping establish more effective systems of innovation financing and management. Projects that seek to tie Lithuania's R&D capabilities to profitable and marketable innovations would also be especially welcome.

KELLY